

REMARKS

In the Office Action, claims 1, 2, 4, 7-10, 23-25, 30-32 and 34 were rejected and claims 3, 5, 6, 26, 28, 29, 33, 35 and 36 were objected to. All pending claims are believed to be fully allowable in their present form. Reconsideration and allowance of all pending claims are requested.

Rejections Under 35 U.S.C. § 102

Examiner rejected claims 1, 7, 8, 23 and 24 as being anticipated under 35 U.S.C. §102 (b) to Keck (U.S. Patent No. 5,519,273, hereinafter “Keck”). Applicants respectfully traverse these rejections.

Legal Precedent

Anticipation under section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). To maintain a proper rejection under section 102, a single reference must teach each and every limitation of the rejected claim. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984). Accordingly, the Applicants need only point to a single element not found in the cited reference to demonstrate that the cited reference fails to anticipate the claimed subject matter. The prior art reference also must show the *identical* invention “*in as complete detail as contained in the ... claim*” to support a *prima facie* case of anticipation. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989).

Claim 1 and the Claims Depending Therefrom

Independent claim 1 recites a method of manufacturing an electric motor. Keck cannot anticipate claim 1 as it fails to disclose several elements of claim 1.

Keck does not teach extrusion of a conduit box to form an extension during assembly of a conduit box to a motor housing.

Claim 1 recites, *inter alia*, “extruding a portion of a conduit box to form a hollow extension.” In a preferred embodiment of the claimed invention, a conduit box 24 with a hole 56 in the bottom is extruded, as with a punch-and-die assembly, so that the hole 56 and its surrounding material become the extension 78. *See, e.g.*, Figs. 5 and 6; page 8, line 24 through page 9, line 13.

The Examiner stated that “Keck teaches that limitation of extruding or forming the extension.” Final Office Action, page 7, section 7. Keck cannot teach extrusion of a conduit box to form an extension because Keck discloses neither extrusion nor a conduit box. The Examiner analogized the conduit box in the present invention (an embodiment of which is illustrated in Fig. 4) to the *fitting* taught by Keck (see, e.g., Fig. 2), although these are structurally different objects. This fitting is clearly not the same, or even analogous to the conduit box recited in claim 1. Similarly, the Examiner could not clearly identify an “extension” in Keck, but rather listed several elements from that invention. Keck discloses an opening 26, an internal member 24, and an intermediate portion 44, all of which the Examiner claims are analogous to the extension in the present invention.

In the Final Office Action, the Examiner focused particularly on the meaning of “extrusion.” Regardless of how the Examiner defines “extrusion,” it is clear that Keck does not disclose extrusion *of a conduit box*. The fitting in Keck is “formed by injection molding.” Col. 5, lines 6-7. What the examiner called an “extension” is formed via injection molding independent of the assembly process. Even if the Examiner’s analogies of the structures were correct, which the Applicants do not concede, Keck does not

disclose extrusion of a conduit box to form an extension during assembly to a motor housing. Rather Keck's "extension" is part of a completely separate fitting and not a conduit box.

Keck does not teach plastic deformation to form a flange.

Claim 1 recites, *inter alia*, "permanently plastically deforming the extension after the extension is inserted through the first hole *to form a flange* thereby to prevent withdrawal of the extension through the first hole." (Emphasis added.) An embodiment of this process is illustrated in Figs. 7 and 8. In this embodiment, it clearly can be seen that the punch press plastically deforms the extension that has been inserted through the hole of the motor housing. This deformation forms the flange 50 which secures the conduit box 24 to the motor housing 12. *See, e.g., Fig. 8.*

By contrast, Keck discloses a fitting which is simply attached or fitted to an electric motor housing. This fitting 12 is attached to the motor housing by resting the fitting in a notch 50 at one end of the motor housing shell 10. The fitting is then secured to the motor housing by an endshield 54 which is attached to the end of the motor housing shell 10. The interior member of the fitting 24 is fully formed before it is placed in the notch of the motor housing shell (col. 5, lines 6-9). Projections 46A-D on the upper surface of the fitting are crushed when the endshield 54 is secured to the motor housing shell 10 (col. 5, lines 50-52). *See generally Fig. 6.*

The Examiner stated:

Keck teaches a process for fitting a conduit box to an electric motor (Abstract), comprising: ... permanently plastically deforming the extension by deforming the crushable projections (Fig. 2, 46A-D; col. 5, lines 50 ff.) after the extension is inserted through the first hole to form a flange (Fig. 2, 24) thereby to prevent withdrawal of the extension through the first hole. Final Office Action, pages 2-3, section 3.

The Examiner's analogies are flawed. Keck in no way teaches plastic deformation of an extension, or any similar element. Furthermore, any plastic deformation which might occur does not form a flange.

As discussed above, the Examiner identified several elements of the Keck arrangement said to be analogous to the extension in claim 1. Despite this list of possibly analogous elements, the Examiner failed to identify *an extension* from Keck which undergoes plastic deformation. Keck discloses "crushable projections" which "are disposed on the upper surface of intermediate portion 44." Col. 5, lines 21-22; *see also* Fig. 2, elements 46A-D. These projections are crushed during assembly of the fitting onto the motor housing. *See* col. 5, lines 50-52. While these projections undergo what could be called plastic deformation, they are not an extension, nor has the Examiner identified them as such.

Still more importantly, even if, *arguendo*, the crushable projections could be considered part of an extension, their deformation does not form a flange. The Examiner clearly analogized the internal member 24 of Keck to the flange in claim 1. Final Office Action, page 3, section 3. Deformation of the projections in Keck in no way forms a flange. Applicants would generally agree that the only element that in any way resembles a flange in Keck is the internal member 24. However, deformation of the crushable projections 46A-D has no effect on the shape or function of the internal member 24.

The crushable projections of Keck do not function as a flange. Deformation of the crushable projections in Keck does not "prevent withdrawal of the extension" from the motor housing as required of the flange from claim 1. Rather, in the Keck arrangement, according to the reference itself, "surfaces of endshield 54 and shell 10 firmly hold fitting 12 in place." Keck, col. 5, lines 53-54; *see also* Fig. 6. The purpose of deforming the crushable projections is to "substantially prevent water, dirt and oil from entering into the motor." Keck, col. 6, lines 2-3.

Thus, the deformation in Keck is different not only structurally, but also functionally, and cannot properly read on the plastic deformation recited in claim 1 of the present application. For the reasons listed above, Keck clearly does not disclose plastic deformation to form a flange.

Any element of the Keck fitting analogous to the claimed flange is not formed by plastic deformation during assembly of a conduit box to a motor housing.

Similarly, as noted above, claim 1 recites, *inter alia*, “permanently *plastically deforming the extension* after the extension is inserted through the first hole *to form a flange* thereby to prevent withdrawal of the extension through the first hole.” (Emphasis added.) As illustrated in Figs. 7 and 8 of the application, and as discussed above, the flange in claim 1 is clearly formed by plastic deformation.

Keck discloses a fitting 12 with an internal member 24. *See generally* Figs. 2, 3, 4, 5 and 6. This fitting “is formed by injection molding.” Keck, col. 5, lines 6-7. The fitting is fully formed independent of assembly to the motor housing and, indeed, would be formed prior to the motor assembly process.

As noted above, the Examiner appeared to state that crushing of Keck’s projections somehow forms the internal member 24. However, Keck clearly does not disclose a flange formed by plastic deformation. Here again, the Examiner analogized the internal member 24 of Keck to the flange in claim 1. As discussed previously, the fitting in Keck is *pre-formed via injection molding* independent of assembly of the fitting to the motor housing. Thus, the “flange” of Keck has already been formed when the crushable projections are deformed.

Deformation of the crushable projections is the only step in Keck which can possibly be construed as plastic deformation during assembly of the fitting to the motor housing. As this deformation has nothing whatsoever to do with creation of a flange,

discussed above, there is clearly nothing in Keck which teaches formation of a flange by plastic deformation during assembly of a conduit box to a motor housing.

Applicants thus conclude that a *prima facie* case of obviousness has not been made out against claim 1. Accordingly, claim 1 and its dependent claims are clearly patentable.

Claim 23 and the Claims Depending Therefrom

Independent claim 23 recites a method of manufacturing an electric motor. As with independent claim 1, Keck fails to disclose several elements of claim 23.

Keck does not teach plastic deformation to form a flange to secure the conduit box to the motor housing.

Similar to claim 1, claim 23 recites, *inter alia*, “*plastically deforming the extension to form a flange* that captures the motor housing between the flange and the bottom of the conduit box *to secure the conduit box to the motor housing.*” (Emphasis added.) An illustration of the resulting structure can be seen in Fig. 9. The motor housing 12 is clearly caught between the flange 50 and the bottom of the conduit box 26. In addition, Figs. 7 and 8 show an example of formation of the flange through plastic deformation.

As discussed in relation to claim 1, Keck in no way teaches plastic deformation to form a flange. Any plastic deformation that occurs in Keck is unrelated to formation of a flange.

In addition, the deformation in Keck does not serve to “capture[] the motor housing between the flange and the bottom of the conduit box to secure the conduit box to the motor housing” as required in claim 23. Rather, as noted above, the deformation in Keck serves to seal water, dirt and oil out of the motor housing. Col. 6, lines 2-3.

Moreover, the fitting in Keck is secured to the motor housing via a pre-formed groove in the fitting and pressure on the fitting from the endshield. *See Fig. 6; see also col. 5, lines 42-54.*

For at least these reasons, Keck clearly does not disclose plastic deformation to form a flange to secure the conduit box to the motor housing.

Any element of the Keck fitting analogous to the claimed flange is not formed by plastic deformation during assembly of a conduit box to a motor housing.

Claim 23 recites, *inter alia*, “*plastically deforming the extension to form a flange* that captures the motor housing between the flange and the bottom of the conduit box to secure the conduit box to the motor housing.” (Emphasis added.) As discussed in relation to claim 1, Keck does not disclose a flange formed by plastic deformation.

Accordingly Keck cannot support a *prima facie* case of anticipation of claim 23. Claim 23 and its dependent claims are therefore patentable over Keck.

Request for Allowance

For the reasons discussed above, Applicants respectfully request that the rejections of claims 1 and 23 be withdrawn and that the claims be allowed. Furthermore, Applicants request that the rejections of claims 7, 8 and 24 be withdrawn, and that these claims be allowed also as they are dependent from claim 1 and 23. Additionally, Examiner objected to claims 3, 5, 6, 26, 28 and 29 as being dependent upon a rejected base claim. In light of the foregoing, Applicants also request allowance of claims 3, 5, 6, 26, 28 and 29, upon the allowance of claims 1 and 23.

Rejections Under 35 U.S.C. § 103

The Examiner rejected claims 2, 4, 9, 10, 25, 27, 30-32 and 34 as being unpatentable under 35 U.S.C. § 103(a) over Keck. Applicants respectfully traverse these rejections.

Legal Precedent

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988). One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

Claim 30 and the Claims Depending Therefrom

Independent claim 30 recites a method of manufacturing an electric motor. Claim 30 recites, *inter alia*, “plastically deforming the extension *to form a generally circular flange* having a smooth inner surface and capturing the motor housing between the

generally circular flange and the bottom of the conduit box to secure the conduit box to the motor housing.” (Emphasis added.) Claim 30 may be differentiated from claims 1 and 23, for example, in that the claimed flange is generally circular. This difference does not impact the function or formation of the flange.

As discussed above, Keck does not disclose a flange formed by plastic deformation as required in claim 30. Therefore, the Examiner clearly has not shown all of the claimed elements as required for a rejection under 35 U.S.C. § 103. The formation of a “generally circular flange” as required in claim 30 is clearly more than a “mere matter of design choice” over Keck as the Examiner stated. Final Office Action, page 5, section 5. Therefore, Applicants respectfully submit that a *prima facie* case of obviousness of claim 30 and its dependent claims simply cannot be supported by Keck, and request that the rejection of claim 30 and claims depending therefrom be withdrawn.

Request for Allowance

Claims 2, 4, 9 and 10 depend from claim 1, claims 25 and 27 depend from claim 23, and claims 31, 32 and 34 depend from claim 30. As discussed above, Keck does not disclose or render obvious the elements recited in claim 1, 23 or 30. Accordingly, Applicants respectfully submit that claims 2, 4, 9, 10, 25, 27, 31, 32 and 34 are allowable at least based on their dependency on allowable base claims. Accordingly, Applicants respectfully request withdrawal of the Examiner’s rejection under 35 U.S.C. § 103 and allowance of claims 2, 4, 9, 10, 25, 27, 31, 32 and 34.

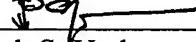
Additionally, Examiner objected to claims 33, 35 and 36 as being dependent upon a rejected base claim. In light of the foregoing, Applicants also request allowance of claims 33, 35 and 36, upon the allowance of claim 30.

Conclusion

In view of the remarks set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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